ABSTRACT

NETWORK PROCESSOR WITH SINGLE INTERFACE SUPPORTING
TREE SEARCH ENGINE AND CAM

A method and system for identifying a data structure associated with a packet

5   of data.   A processor internal to a packet processor may extract one or more fields in

a packet header field of a received packet of data to generate a search key.   The

internal processor may then be configured to select which table, e.g., routing table,

quality of service table, filter table, needs to be accessed using the search key in order

to process the received packet of data.   A determination may then be made by the

10   internal processor as to whether a CAM or a hash table and a Patricia Tree are used to

identify the data structure associated with the received packet of data.   Based on table

definitions in a register, the internal processor may make such a determination.